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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,980	12/19/2001	Dong-Woo Kim	678-766 (P9755)	4825

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EXAMINER	
CHO, UN C	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,980	KIM, DONG-WOO	
	Examiner	Art Unit	
	Un C. Cho	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/14/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 2/14/2006 has been placed in record and considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (US 6,625,282 B2) in view of Magnasco et al. (US 6,016,347) and in view of Tuoriniemi et al. (US 5,978,689).

Regarding claim 1, Liang discloses a wireless headset (Fig. 1, 40) with a radio communication module (not shown), comprising a microphone supporting member having a microphone (Fig. 1, 42) installed therein and a controller (not shown) connected to the sensing device (Fig. 1, 43) and the radio communication module, the controller being operative to establish a link by performing an ID (identification) registration between the wireless headset and a master terminal (controller unit, Fig. 1, 20) registered in the wireless headset (Liang, Col. 3, lines 66 through Col 4, lines 1 – 12).

However, Liang as applied above does not specifically disclose a connector located between the microphone supporting member and a main body of the wireless headset and coupled thereto to allow for displacement of the main body and microphone supporting member relative to one another between a folding and unfolding position; a sensing device located in the connector for automatically determining whether the microphone supporting member and a main body are displaced to one of the folding and unfolding positions; and a controller connected to the sensing device and the radio communication module, the controller being operative to establish a link between the wireless headset and a master terminal registered in the wireless headset if it is determined that the microphone supporting member and the main body are displaced to the unfolding position. In an analogous art, Magnasco discloses a connector located between the microphone supporting member and a main body of the wireless headset and coupled thereto to allow for displacement of the main body and microphone supporting member relative to one another between a folding and unfolding position (microphone boom (Fig. 3, 102) is coupled to a shaft member (Fig. 3, 202) to allow rotation of the microphone boom, which is connected to the headset housing (Fig. 1, 110), Magnasco, Col. 3, lines 16 – 24 and Col. 4, lines 20 – 29); a controller connected to the sensing device and the radio communication module, the controller being operative to establish a link between the wireless headset and a master terminal registered in the wireless headset if it is determined that the microphone supporting member and the main body are

displaced to the unfolding position (PCB circuitry having a radio transmitter and a optical transceiver, controls the functions of the headset and the operational condition of the headset, whereas its functions are provided through the different positions of the microphone boom with respect to the housing such as "off or standby or mute or talk", Magnasco, Col. 3, lines 25 – 35 and Col. 5, line 3 through Col. 6, line 35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Magnasco to the system of Liang in order to provide a cordless headset having a microphone boom wherein the headset is selectively configured to be on, off or muted according to a rotational position of the microphone boom and using an optical transceiver which is less susceptible to wear, contamination and misalignment and occupies less space than prior mechanical switch devices.

However, Liang in view of Magnasco as applied above does not specifically disclose a sensing device located in the connector for automatically determining whether the microphone supporting member and a main body are displaced to one of the folding and unfolding positions. In an analogous art, Tuoriniemi discloses a sensing device located in the connector (a user-manipulated switch (Fig. 1, 12) is connected to pivot, Fig. 1, 15 which connects the boom and the main body, Tuoriniemi, Col. 4, lines 9 – 58) for automatically determining whether the microphone supporting member and a main body are displaced to one of the folding and unfolding positions (according to the position of the switch determining whether the boom and the main body are in one of the

folding and unfolding positions, Tuoriniemi, Col. 5, line 41 through Col. 6, line 36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Tuoriniemi to the modified system of Liang and Magnasco in order to provide a headset performing multiple functions by changing the position of the boom giving a user a hands-free alternative to listen to an audio program and to initiate phone calls without taking the handset off.

Regarding claim 2, Liang in view of Magnasco and further in view of Tuoriniemi as applied to claim 1 above discloses wherein the connector attaching the microphone supporting member to the main body of the wireless headset includes a hinge structure housing the sensing device (optical transceiver (Fig. 3, 228) near the rotator element (Fig. 3, 210) is within the headset housing, Magnasco, Col. 5, lines 3 – 26).

Regarding claim 11, the claim is interpreted and rejected for the same reason as set forth in claim 1.

4. Claims 3 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang in view of Magnasco, in view of Tuoriniemi and in view of Specification of the Bluetooth System v1.0B, December 1st 1999 (hereto referred as Bluetooth Specification v1.0B).

Regarding claim 3, Liang in view of Magnasco discloses a wireless headset with a Bluetooth module comprising a microphone-supporting member

having a microphone installed therein and coupled to a main body of the wireless headset (Liang, Col. 3, lines 66 through Col 4, lines 1 – 12). Tuoriniemi discloses a hinge structure located between and attached to the main body and microphone supporting member so that the main body and microphone supporting member are displaceable relative to one another between a folding and unfolding position; a sensing device located in the hinge structure for determining the unfolding position and a controller connected to the sensing device (Magnasco, Col. 5, lines 3 – 26; Tuoriniemi, Col. 4, lines 9 – 58 and Col. 5, line 41 through Col. 6, line 36).

However, Liang in view of Magnasco and further in view of Tuoriniemi as applied above does not specifically disclose Bluetooth module registering an ID of the wireless headset in a counterpart terminal through the Bluetooth module if the unfolding position is determined. In an analogous art, Bluetooth Specification v1.0B discloses Bluetooth module for registering Bluetooth device address of the device in a counterpart device through the Bluetooth module (Bluetooth Specification v1.0B, User Interface aspects, Page 25). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Bluetooth Specification v1.0B to Liang, Magnasco and Tuoriniemi in order to provide an improved structure of earphone being small, light and easy for storage with excellent quality of communication, compatibility and flexibility to adapt to many devices having the same type of technology.

Regarding claim 4, Liang in view of Magnasco, in view of Tuoriniemi and in view of Bluetooth Spec v1.0B discloses wherein the microphone supporting member is attached to the main body of the wireless headset in the hinge structure (microphone boom is attached to the headset through a shaft member in order to permit movement of the microphone boom with respect to the headset housing, Magnasco, Col. 4, lines 20 – 29).

Regarding claim 5, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 6, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 7, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 8, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 9, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 10, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Response to Arguments

5. Applicant's arguments filed on January 23rd 2006 have been fully considered but they are not persuasive.

Regarding claim 1, the applicant presented the argument that the references provided by the examiner fail to teach the claimed invention of claim 1. The examiner disagrees with the argument provided by the applicant.

Liang clearly discloses a wireless headset (Fig. 5, 40) having a wireless communication module (Fig. 5, 41) that communicates with a control unit (Fig. 5, 20) whereas the wireless headset includes a microphone-supporting member having a microphone (Fig. 5, 42) and a controller (not shown) connected to a switch (Fig. 5, 43) and a wireless communication module (Fig. 5, 41), the controller being operative to establish a link by performing an identification registration between the wireless headset and a control unit if it is determined that the switch has been activated (Liang discloses a first transceiver (arranged inside the casing of the control unit) and second transceiver (arranged inside the casing of the wireless headset) that are blue tooth based transceivers (Liang, Col. 2, lines 35 – 38 and Col. 3, lines 31 – 38). Even though Liang does not specifically disclose the registration process between the wireless headset and the control unit, it would have been obvious to one of ordinary skill in the art that in order for the slave to communicate with a master's device there has to be a registration process between the two, where slave device transmits its identification to the master's device, which can be implemented when the user actuates the switch in the wireless headset to take a phone call using the wireless headset). Moreover, the limitation of detecting the folding and unfolding positions is to activate and de-activate the operation of the wireless headset.

Tuoriniemi clearly discloses that according to the position of the user-manipulated switch it is determined whether the boom and the main body are in one of the activating and de-activating positions (Tuoriniemi, Col. 6, lines 55 – 67). Therefore, the office action mailed on 10/19/2005 stands.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho 3/29/06 UC
Examiner
Art Unit 2617

George Eng
GEORGE ENG
SUPERVISORY PATENT EXAMINER